



## BLASTP 2.2.9 [May-01-2004]

## Reference:

Altschul, Stephen F., Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", Nucleic Acids Res. 25:3389-3402.

RID: 1084304418-31146-18148171693.BLASTQ3

Query=

(51 letters) Residues 67-117 Seq 10 10: 206

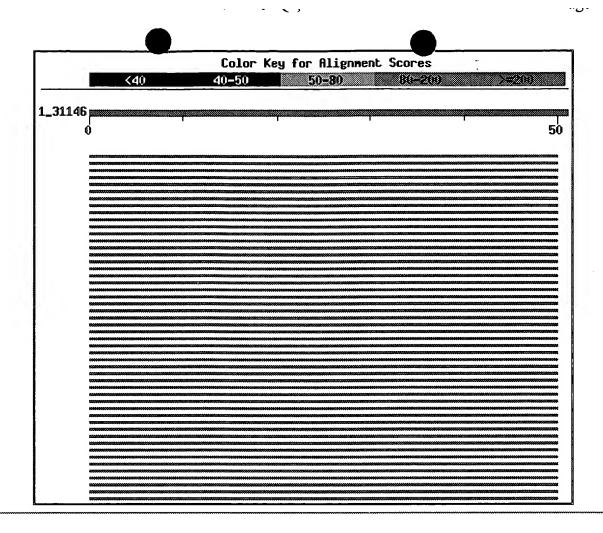
Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples 1,798,171 sequences; 593,787,773 total letters

If you have any problems or questions with the results of this search please refer to the  ${\bf BLAST}$   ${\bf FAQs}$ 

Taxonomy reports

## Distribution of 100 Blast Hits on the Query Sequence

Mouse-over to show defline and scores. Click to show alignments



	Score	E
Sequences producing significant alignments:	(bits)	Value
<pre>gi 2326455 emb CAA72801.1  polyprotein [Hepatitis C virus t</pre>	<u>119</u>	2e-26
gi 3550763 dbj BAA32666.1  polyprotein [Hepatitis C virus]	115	2e-25
gi 1765877 dbj BAA13620.1  core, env and part of E2/NS1 [He	111	3e-24
gi 3550765 dbj BAA32667.1  polyprotein [Hepatitis C virus]	111	4e-24
gi 1765873 dbj BAA13618.1  core, env and part of E2/NS1 [He	111	5e-24
gi 7650244 gb AAF65953.1  polyprotein [Hepatitis C virus]	110	6e-24
gi 1765885 dbj BAA13624.1  core, env and part of E2/NS1 [He	<u>110</u>	7e-24
<pre>gi 464178 dbj BAA03581.1  polyprotein [Hepatitis C virus]</pre>	<u>110</u>	9e-24
gi 1765887 dbj BAA13625.1  core, env and part of E2/NS1 [He	<u>110</u>	9e-24
gi 1765879 dbj BAA13621.1  core, env and part of E2/NS1 [He	110	1e-23
gi 1765881 dbj BAA13622.1  core, env and part of E2/NS1 [He	109	1e-23
gi 2252490 emb CAA72338.1  HCV polyprotein [Hepatitis C vir	109	1e-23
gi 600265 dbj BAA13617.1  core, env and part of E2/NS1 [Hep	<u> 109</u>	1e-23
gi 1765875 dbj BAA13619.1  core, env and part of E2/NS1 [He	109	1e-23
gi 130461 sp P27958 POLG HCVH Genome polyprotein [Contains:	109	1e-23
gi 8926245 gb AAF81759.1  polyprotein [Hepatitis C virus]	109	2e-23
gi 14532245 gb AAK66554.1  HCV type 1a/1b chimera polyprote	109	2e-23
<pre>gi 2327071 gb AAB67036.1  polyprotein [Hepatitis C virus st</pre>	<u> 109</u>	2e-23
gi 22129793 ref NP 671491.1  polyprotein [Hepatitis C virus	<u> 109</u>	2e-23
gi 2327075 gb AAB67038.1  polyprotein [Hepatitis C virus st	109	2e-23
gi 9930557 gb AAG02099.1  polyprotein [Hepatitis C virus]	109	2e-23
gi 1066618 gb AAC42193.1  core protein	108	4e-23
gi 1765866 dbj BAA13614.1  core, env and part of E2/NS1 [He	105	3e-22

£ .		
gi 1765868 dbj BAA13615.1  core, env and part of E2/NS1 [He	105	3e-22
gi 1181859 gb AAA86919.1  polyprotein	104	4e-22
gi 1009263 dbj BAA07092.1  core, env and part of E2/NS1 [He	104	5e-22
gi 1009265 dbj BAA07093.1  core, env and part of E2/NS1 [He	104	5e-22
gi 410168 gb AAA20154.1  structural region	<u>104</u>	5e-22
gi 1009261 dbj BAA07091.1  core, env and part of E2/NS1 [He	104	5e-22
gi 1009259 dbj BAA07090.1  core, env and part of E2/NS1 [He	103	7e-22
gi 1009271 dbj BAA07271.1  core, env and part of E2/NS1 [He	<u>103</u>	8e-22
gi 22212866 qb AAM94419.1  polyprotein [Hepatitis C virus]	102	2e-21
gi 13344961 gb AAK19134.1  polyprotein precursor [Hepatitis	102	3e-21
<pre>gi 13344963 gb AAK19135.1  polyprotein precursor [Hepatitis</pre>	<u>102</u>	3e-21
gi 13344967 gb AAK19137.1  polyprotein precursor [Hepatitis	101	3e-21
gi 13344955 gb AAK19131.1  polyprotein precursor [Hepatitis	101	3e-21
<pre>gi 13344965 gb AAK19136.1  polyprotein precursor [Hepatitis</pre>	<u>101</u>	3e-21
gi 13344949 gb AAK19128.1  polyprotein precursor [Hepatitis	101	4e-21
gi 13344947 gb AAK19127.1  polyprotein precursor [Hepatitis	101	5e-21
gi 13344957 gb AAK19132.1  polyprotein precursor [Hepatitis	<u>101</u>	5e-21
gi 13344953 gb AAK19130.1  polyprotein precursor [Hepatitis	101	5e-21
gi 13344951 gb AAK19129.1  polyprotein precursor [Hepatitis	101	5e-21
<del></del>	100	7e-21
<pre>gi 25900861 dbj BAC41268.1  polyprotein [Hepatitis C virus]</pre>		
gi 1066604 gb AAC42186.1  core protein	100	8e-21
gi 410166 gb AAA20153.1  structural region	100	8e-21
gi 25900881 dbj BAC41278.1  polyprotein [Hepatitis C virus]	100	1e-20
<pre>gi 474978 dbj BAA03730.1  polyprotein [Hepatitis C virus]</pre>	<u>100</u>	1e-20
qi 464172 dbj BAA03732.1  polyprotein [Hepatitis C virus]	100	1e-20
gi 25900867 dbj BAC41271.1  polyprotein [Hepatitis C virus]	100	1e-20
	100	
<pre>gi 25900877 dbj BAC41276.1  polyprotein [Hepatitis C virus]</pre>		1e-20
<pre>gi 25900875 dbj BAC41275.1  polyprotein [Hepatitis C virus]</pre>	<u>100</u>	1e-20
gi 25900879 dbj BAC41277.1  polyprotein [Hepatitis C virus]	100	1e-20
gi 25900887 dbj BAC41281.1  polyprotein [Hepatitis C virus]	99	2e-20
gi 25900869 dbj BAC41272.1  polyprotein [Hepatitis C virus]	99	2e-20
	99	2e-20
gi 1066572 gb AAC42170.1  core protein		
<pre>gi 974347 qb AAB40038.1  core protein [Hepatitis C virus ty</pre>	<u>98</u>	5e-20
gi 532381 gb AAA21037.1  polyprotein	98	5e-20
gi 329736 gb AAA98989.1  capsid and envelope:x proteins	97	9e-20
gi 1246371 dbj BAA09974.1  polyprotein [Hepatitis C virus]	95	5e-19
<pre>gi 1246377 dbj BAA09976.1  polyprotein [Hepatitis C virus]</pre>	<u>95</u>	5e-19
<u>gi 532457 gb AAA21075.1 </u> polyprotein	_92	3e-18
gi 1930120 gb AAB51539.1  nucleocapsid protein [Hepatitis C	92	3e-18
gi 7274365 gb AAF44740.1  core structural protein [Hepatiti	91	5e-18
gi 7274363 gb AAF44739.1  core structural protein [Hepatiti	91	5e-18
<pre>gi 14161283 gb AAK54689.1  polyprotein [Hepatitis C virus]</pre>	<u>91</u>	1e-17
gi 532369 gb AAA21031.1  polyprotein	90	1e-17
gi 42411917 gb AAS15483.1  core protein [Hepatitis C virus]	90	1e-17
	90	1e-17
<pre>gi 42411125 gb AAS15087.1  core protein [Hepatitis C virus]</pre>	<u>89</u>	3e-17
gi 42411619 gb AAS15334.1  core protein [Hepatitis C virus]	89	3e-17
gi[42411783 gb AAS15416.1  core protein [Hepatitis C virus]	89	3e-17
gi 42411721 gb AAS15385.1  core protein [Hepatitis C virus]	89	3e-17
<pre>gi 42411903 gb AAS15476.1  core protein [Hepatitis C virus]</pre>	89	3e-17
gi 296160 emb CAA50531.1  core protein [Hepatitis C virus]	<u>89</u>	3e-17
gi 42411249 gb AAS15149.1  core protein [Hepatitis C virus]	89	3e-17
gi 42411293 gb AAS15171.1  core protein [Hepatitis C virus]	89	3e-17
gi 42411387 gb AAS15218.1  core protein [Hepatitis C virus]	89	3e-17
<pre>gi 420567 pir  S32740 polyprotein - hepatitis C virus (isol</pre>	<u>89</u>	3e-17
gi 42411725 gb AAS15387.1  core protein [Hepatitis C virus]	89	3e-17
gi 42411091 gb AAS15070.1  core protein [Hepatitis C virus]	89	3e-17
gi 42411089 gb AAS15069.1  core protein [Hepatitis C virus]	_89	3e-17
gi 42411853 gb AAS15451.1  core protein [Hepatitis C virus]	89	3e-17
gi 42411889 gb AAS15469.1  core protein [Hepatitis C virus]	89	3e-17

gi 1322346 gb AAB00216.1	core protein			89	3e-17
gi 42411263 gb AAS15156.1	core protein	[Hepatitis	C virus]	89	3e-17
gi 42411347 gb AAS15198.1	core protein	[Hepatitis	C virus]	89	3e-17
gi 42411883 gb AAS15466.1	core protein	[Hepatitis	C virus]	89	3e-17
gi 42411565 gb AAS15307.1	core protein	[Hepatitis	C virus]	89	3e-17
gi 42411381 gb AAS15215.1	core protein	[Hepatitis	C virus]	89	3e-17
gi 42411191 gb AAS15120.1	core protein	[Hepatitis	C virus]	89	3e-17
gi 1322338 gb AAB00212.1	core protein			89	3e-17
gi 42411115 gb AAS15082.1	core protein	[Hepatitis	C virus]	89	4e-17
gi 42411107 gb AAS15078.1	core protein	[Hepatitis	C virus]	89	4e-17
gi 742039 prf  2008346A co	ore protein			89	4e-17
gi 42411375 gb AAS15212.1	core protein	[Hepatitis	C virus]	88	4e-17
gi 42411785 gb AAS15417.1	core protein	[Hepatitis	C virus]	_88	4e-17
gi 42411909 gb AAS15479.1	core protein	[Hepatitis	C virus]	88	4e-17
gi 26053621 ref NP_751919.	<u>l </u> core protei	n; p21c [He	patitis	88	4e-17
gi 42411251 gb AAS15150.1	core protein	[Hepatitis	C virus]	88	4e-17
gi 42411383 gb AAS15216.1	core protein	[Hepatitis	C virus]	88	5e-17

## Alignments

```
Get selected sequences
                               Select all
                                           Deselect all
☐ >gi|2326455|emb|CAA72801.1|
                                  polyprotein [Hepatitis C virus type 6a]
          Length = 3018
 Score = 119 \text{ bits } (298), \text{ Expect = } 2e-26
 Identities = 50/51 (98%), Positives = 51/51 (100%)
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
           KARQPQGRHWAQPGYPWPLYG+EGCGWAGWLLSPRGSRPHWGPNDPRRRSR
Sbjct: 67 KARQPQGRHWAQPGYPWPLYGSEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117
\square > gi | 3550763 | dbj | BAA32666.1 |
                                polyprotein [Hepatitis C virus]
          Length = 3016
 Score = 115 \text{ bits } (288), \text{ Expect} = 2e-25
 Identities = 49/51 (96%), Positives = 50/51 (98%)
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
           KARQ QGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRP+WGPNDPRRRSR
Sbjct: 67 KARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSR 117
\square > gi|1765877|dbj|BAA13620.1|
                                  core, env and part of E2/NS1 [Hepatitis C virus]
          Length = 414
 Score = 111 bits (278), Expect = 3e-24
 Identities = 50/51 (98%), Positives = 50/51 (98%)
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
           KAROP GRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR
Sbjct: 67 KARQPTGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117
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□ >gi|3550765|dbj|BAA32667.1| polyprotein [Hepatitis C virus]
          Length = 3015
Score = 111 \text{ bits } (277), \text{ Expect = } 4e-24
 Identities = 47/51 (92%), Positives = 48/51 (94%)
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
           KARQP GR W QPGYPWPLYGNEGCGWAGWLLSPRGSRP+WGPNDPRRRSR
Sbjct: 67 KARQPIGRSWGQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSR 117
☐ >gi|1765873|dbj|BAA13618.1| core, env and part of E2/NS1 [Hepatitis C virus]
          Length = 414
Score = 111 bits (277), Expect = 5e-24
 Identities = 50/51 (98%), Positives = 50/51 (98%)
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
           KARQ QGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR
Sbjct: 67 KARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117
☐ >qi|7650244|qb|AAF65953.1| polyprotein [Hepatitis C virus]
          Length = 3010
Score = 110 \text{ bits } (276), Expect = 6e-24
 Identities = 47/51 (92%), Positives = 48/51 (94%)
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
           KAROP+GR WAQPGYPWPLYGNEG GWAGWLLSPRGSRP WGPNDPRRRSR
Sbjct: 67 KARQPEGRAWAQPGYPWPLYGNEGMGWAGWLLSPRGSRPSWGPNDPRRRSR 117
\square >gi|1765885|dbj|BAA13624.1| core, env and part of E2/NS1 [Hepatitis C virus]
          Length = 414
 Score = 110 \text{ bits } (276), \text{ Expect} = 7e-24
 Identities = 50/51 (98%), Positives = 50/51 (98%)
Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
           KARQ QGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR
Sbjct: 67 KARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117
□ >gi|464178|dbj|BAA03581.1| polyprotein [Hepatitis C virus]
          Length = 3011
 Score = 110 \text{ bits } (275), \text{ Expect = } 9e-24
 Identities = 46/51 (90%), Positives = 49/51 (96%)
Query: 1
           KAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
```

KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP+DPRRRSR

```
Length = 414
Score = 110 \text{ bits } (274), \text{ Expect = } 9e-24
Identities = 50/51 (98%), Positives = 50/51 (98%)
Query: 1
          KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
          KARQ QGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR
Sbjct: 67 KARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117
□>gi|1765879|dbj|BAA13621.1| core, env and part of E2/NS1 [Hepatitis C virus]
         Length = 414
Score = 110 \text{ bits } (274), Expect = 1e-23
Identities = 49/51 (96%), Positives = 50/51 (98%)
          KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
          KAROP GRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRP+WGPNDPRRRSR
Sbjct: 67 KARQPTGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSR 117
□ >gi|1765881|dbj|BAA13622.1| core, env and part of E2/NS1 [Hepatitis C virus]
          Length = 414
Score = 109 \text{ bits } (273), \text{ Expect} = 1e-23
Identities = 48/51 (94%), Positives = 49/51 (96%)
Query: 1
          KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
          KARQ QGRHWAQPGYPWPLYGNEGCGWAGWL+SPRGSRPHWGPNDPR RSR
Sbjct: 67 KARQSQGRHWAQPGYPWPLYGNEGCGWAGWLMSPRGSRPHWGPNDPRHRSR 117
☐ >qi|2252490|emb|CAA72338.1| HCV polyprotein [Hepatitis C virus type 4a]
         Length = 3008
Score = 109 \text{ bits } (273), \text{ Expect} = 1e-23
 Identities = 46/51 (90%), Positives = 48/51 (94%)
          KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
          KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGPNDPR RSR
Sbjct: 67 KARRPEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRGRSR 117
□ >gi|600265|dbj|BAA13617.1| core, env and part of E2/NS1 [Hepatitis C virus]
          Length = 414
 Score = 109 \text{ bits } (273), \text{ Expect} = 1e-23
 Identities = 49/51 (96%), Positives = 50/51 (98%)
```

KARQPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KARQ QGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRP+WGPNDPRRRSR Sbjct: 67 KARQSQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSR 117 □>gi|1765875|dbj|BAA13619.1| core, env and part of E2/NS1 [Hepatitis C virus] Length = 414Score = 109 bits (273), Expect = 1e-23Identities = 49/51 (96%), Positives = 49/51 (96%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAROP GRHWAQPGY WPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR Sbjct: 67 KAROPTGRHWAOPGYAWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117 ☐ >gi|130461|sp|P27958|POLG HCVH Genome polyprotein [Contains: Capsid protein C (C (P22); Envelope glycoprotein E1 (GP32) (GP35); Envelope glycoprotein E2 (GP68) (GP70) (NS1); Protein P7; Nonstructural protein NS2 (P21); Protease/helicase NS3 (P70) (Hepacivirin); Nonstructural protein NS4A (P4); Nonstructural protein NS4B (P27); Nonstructural protein NS5A (P56); Nonstructural protein NS5B (P66) (P70) (RNA-directed RNA polymerase) ] genome polyprotein - hepatitis C virus (strain H) gi|74464|pir||GNWVCH gi|329738|gb|AAA45534.1| polyprotein Length = 3011Score = 109 bits (273), Expect = 1e-23Identities = 46/51 (90%), Positives = 48/51 (94%) KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117 □>gi|8926245|gb|AAF81759.1| polyprotein [Hepatitis C virus] Length = 3011Score = 109 bits (272), Expect = 2e-23Identities = 46/51 (90%), Positives = 48/51 (94%)

Query: 1 KAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR

Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117

 $\square$  >gi|14532245|gb|AAK66554.1| HCV type 1a/1b chimera polyprotein [synthetic constr gi|14532247|gb|AAK66555.1| HCV type la polyprotein [synthetic construct] HCV type 1a/1b chimera polyprotein [synthetic construct gi|14532249|gb|AAK66556.1| Length = 3011

Score = 109 bits (272), Expect = 2e-23Identities = 46/51 (90%), Positives = 48/51 (94%)

KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117 □>qi|2327071|qb|AAB67036.1| polyprotein [Hepatitis C virus strain H77] Length = 3011Score = 109 bits (272), Expect = 2e-23Identities = 46/51 (90%), Positives = 48/51 (94%) Query: 1 KAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117 □ >gi|22129793|ref|NP 671491.1| polyprotein [Hepatitis C virus] qi|2316098|qb|AAB66324.1| polyprotein [Hepatitis C virus] Length = 3011Score = 109 bits (272), Expect = 2e-23Identities = 46/51 (90%), Positives = 48/51 (94%) KAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1

KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR

Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117

 $\square$  >gi|2327075|gb|AAB67038.1| polyprotein [Hepatitis C virus strain H77] Length = 3011

Score = 109 bits (272), Expect = 2e-23Identities = 46/51 (90%), Positives = 48/51 (94%)

Query: 1 KAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117

 $\square > gi|9930557|gb|AAG02099.1|$  polyprotein [Hepatitis C virus] Length = 3011

Score = 109 bits (272), Expect = 2e-23Identities = 46/51 (90%), Positives = 48/51 (94%)

KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117

☐ >qi|1066618|qb|AAC42193.1| core protein Length = 319

Score = 108 bits (269), Expect = 4e-23Identities = 50/51 (98%), Positives = 50/51 (98%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KARQ QGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR Sbjct: 67 KARQTQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117 □>gi|1765866|dbj|BAA13614.1| core, env and part of E2/NS1 [Hepatitis C virus] Length = 414Score = 105 bits (262), Expect = 3e-22Identities = 47/51 (92%), Positives = 48/51 (94%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KARQP GR W QPGYPWPLYGNEGCGWAGWLLSPRGSRP+WGPNDPRRRSR Sbjct: 67 KARQPIGRSWGQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSR 117 ☐>gi|1765868|dbj|BAA13615.1| core, env and part of E2/NS1 [Hepatitis C virus] Length = 414Score = 105 bits (262), Expect = 3e-22Identities = 47/51 (92%), Positives = 48/51 (94%) KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KARQP GR W QPGYPWPLYGNEGCGWAGWLLSPRGSRP+WGPNDPRRRSR Sbjct: 67 KARQPTGRSWGQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSR 117  $\square > gi|1181859|gb|AAA86919.1|$  polyprotein Length = 802Score = 104 bits (260), Expect = 4e-22Identities = 47/51 (92%), Positives = 48/51 (94%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KARQP+GR WAQPGYPWPLYGNEG GWAGWLLSPRGSRP WGPNDPRRRSR Sbjct: 67 KARQPEGRAWAQPGYPWPLYGNEGMGWAGWLLSPRGSRPSWGPNDPRRRSR 117 □ >qi|1009263|dbj|BAA07092.1| core, env and part of E2/NS1 [Hepatitis C virus] Length = 414Score = 104 bits (260), Expect = 5e-22Identities = 47/51 (92%), Positives = 47/51 (92%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR Sbjct: 67 KARHQTGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117

☐ >qi|1009265|dbj|BAA07093.1| core, env and part of E2/NS1 [Hepatitis C virus]

Length = 415

Score = 104 bits (260), Expect = 5e-22Identities = 47/51 (92%), Positives = 48/51 (94%)

Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR+P GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGPNDPRRRSR

sbjct: 67 KARRPTGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPNDPRRRSR 117

 $\square > qi \mid 410168 \mid qb \mid AAA20154.1 \mid$  structural region Length = 411

Score = 104 bits (260), Expect = 5e-22Identities = 47/51 (92%), Positives = 48/51 (94%)

Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KARQP+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR

Sbjct: 67 KARQPEGRAWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117

 $\square > gi \mid 1009261 \mid dbj \mid BAA07091.1 \mid$  core, env and part of E2/NS1 [Hepatitis C virus] Length = 414

Score = 104 bits (259), Expect = 5e-22 Identities = 47/51 (92%), Positives = 47/51 (92%)

Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR

Sbjct: 67 KARHQTGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117

 $\square > gi \mid 1009259 \mid dbj \mid BAA07090.1 \mid$  core, env and part of E2/NS1 [Hepatitis C virus] Length = 414

Score = 103 bits (258), Expect = 7e-22Identities = 47/51 (92%), Positives = 47/51 (92%)

Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR

Sbjct: 67 KARHQTGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117

 $\square > gi|1009271|dbj|BAA07271.1|$  core, env and part of E2/NS1 [Hepatitis C virus] Length = 414

Score = 103 bits (258), Expect = 8e-22Identities = 46/51 (90%), Positives = 46/51 (90%)

Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51

K R GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR

Sbjct: 67 KVRHQTGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 117

□ >qi|22212866|qb|AAM94419.1| polyprotein [Hepatitis C virus] Length = 746Score = 102 bits (254), Expect = 2e-21 Identities = 46/51 (90%), Positives = 48/51 (94%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117 □ >qi|13344961|qb|AAK19134.1| polyprotein precursor [Hepatitis C virus] Length = 415Score = 102 bits (253), Expect = 3e-21Identities = 46/51 (90%), Positives = 48/51 (94%) Query: 1 KAROPOGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR+P+GR WAOPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117 □ >qi|13344963|qb|AAK19135.1| polyprotein precursor [Hepatitis C virus] Length = 415Score = 102 bits (253), Expect = 3e-21Identities = 46/51 (90%), Positives = 48/51 (94%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117 ☐ >qi|13344967|qb|AAK19137.1| polyprotein precursor [Hepatitis C virus] Length = 415Score = 101 bits (252), Expect = 3e-21Identities = 46/51 (90%), Positives = 48/51 (94%) KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117 □>gi|13344955|gb|AAK19131.1| polyprotein precursor [Hepatitis C virus] Length = 415Score = 101 bits (252), Expect = 3e-21Identities = 46/51 (90%), Positives = 48/51 (94%) KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KAR+P+GR WAOPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR

Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117

```
□>gi|13344965|gb|AAK19136.1| polyprotein precursor [Hepatitis C virus]
          Length = 415
 Score = 101 bits (252), Expect = 3e-21
 Identities = 46/51 (90%), Positives = 48/51 (94%)
Query: 1
           KAROPOGRHWAOPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
           KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR
Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117
□>gi|13344949|gb|AAK19128.1| polyprotein precursor [Hepatitis C virus]
          Length = 415
 Score = 101 \text{ bits } (252), \text{ Expect = } 4e-21
 Identities = 46/51 (90%), Positives = 48/51 (94%)
Query: 1
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
           KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR
Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117
□ >gi|13344947|qb|AAK19127.1| polyprotein precursor [Hepatitis C virus]
          Length = 415
 Score = 101 \text{ bits } (251), Expect = 5e-21
 Identities = 46/51 (90%), Positives = 48/51 (94%)
Query: 1
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
           KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR
Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117
\square > gi | 13344957 | gb | AAK19132.1 | polyprotein precursor [Hepatitis C virus]
          Length = 415
 Score = 101 bits (251), Expect = 5e-21
 Identities = 46/51 (90%), Positives = 48/51 (94%)
Query: 1
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
           KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR
Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117
□>gi|13344953|gb|AAK19130.1| polyprotein precursor [Hepatitis C virus]
          Length = 415
 Score = 101 \text{ bits } (251), \text{ Expect = } 5e-21
 Identities = 46/51 (90%), Positives = 48/51 (94%)
Query: 1
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
```

KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR

```
□>gi|13344951|gb|AAK19129.1| polyprotein precursor [Hepatitis C virus]
          Length = 415
Score = 101 bits (251), Expect = 5e-21
Identities = 46/51 (90%), Positives = 48/51 (94%)
          KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
           KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR
Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117
□>gi|25900861|dbj|BAC41268.1| polyprotein [Hepatitis C virus]
          Length = 491
Score = 100 \text{ bits } (250), Expect = 7e-21
Identities = 46/51 (90%), Positives = 48/51 (94%)
Query: 1
          KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
           KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR
sbjct: 56 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 106
\square >qi|1066604|qb|AAC42186.1| core protein
          Length = 319
Score = 100 \text{ bits } (249), \text{ Expect} = 8e-21
 Identities = 46/51 (90%), Positives = 47/51 (92%)
          KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
Query: 1
           K RQP GR W QPGYPWPLYGNEGCGWAGWLLSPRGSRP+WGPNDPRRRSR
Sbjct: 67 KVRQPTGRSWGQPGYPWPLYGNEGCGWAGWLLSPRGSRPNWGPNDPRRRSR 117
\square > gi | 410166 | gb | AAA20153.1 | structural region
          Length = 411
 Score = 100 bits (249), Expect = 8e-21
 Identities = 46/51 (90%), Positives = 48/51 (94%)
Query: 1
           KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51
           KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR
Sbjct: 67 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117
□>gi|25900881|dbj|BAC41278.1| polyprotein [Hepatitis C virus]
          Length = 488
 Score = 100 bits (248), Expect = 1e-20
 Identities = 46/51 (90%), Positives = 48/51 (94%)
```

KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 56 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 106 □ >gi|474978|dbj|BAA03730.1| polyprotein [Hepatitis C virus] Length = 502Score = 100 bits (248), Expect = 1e-20Identities = 46/51 (90%), Positives = 49/51 (96%) KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP+DPRRRSR Sbjct: 67 KARRPEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPSDPRRRSR 117 □ >gi|464172|dbj|BAA03732.1| polyprotein [Hepatitis C virus] Length = 502Score = 99.8 bits (247), Expect = 1e-20Identities = 46/51 (90%), Positives = 48/51 (94%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR KARRPEGRSWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 117 □>gi|25900867|dbj|BAC41271.1| polyprotein [Hepatitis C virus] Length = 488Score = 99.8 bits (247), Expect = 1e-20Identities = 46/51 (90%), Positives = 48/51 (94%) KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51 Query: 1 KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR Sbjct: 56 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 106 □ >gi|25900877|dbj|BAC41276.1| polyprotein [Hepatitis C virus] Length = 488Score = 99.8 bits (247), Expect = 1e-20Identities = 46/51 (90%), Positives = 48/51 (94%) Query: 1 KARQPQGRHWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPHWGPNDPRRRSR 51

Sbjct: 56 KARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRGSRPSWGPTDPRRRSR 106

KAR+P+GR WAQPGYPWPLYGNEGCGWAGWLLSPRGSRP WGP DPRRRSR

Get selected sequences Select all Deselect all

Database: All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples Posted date: May 11, 2004 12:59 AM Number of letters in database: 593,787,773 Number of sequences in database: 1,798,171 Lambda K Η 0.144 0.570 0.319 Gapped Lambda

Matrix: BLOSUM62 Gap Penalties: Existence: 11, Extension: 1 Number of Hits to DB: 22,039,502 Number of Sequences: 1798171 Number of extensions: 836773 Number of successful extensions: 1918 Number of sequences better than 10.0: 322 Number of HSP's better than 10.0 without gapping: 321 Number of HSP's successfully gapped in prelim test: 1 Number of HSP's that attempted gapping in prelim test: 1595 Number of HSP's gapped (non-prelim): 324 length of query: 51 length of database: 593,787,773 effective HSP length: 24 effective length of query: 27 effective length of database: 550,631,669 effective search space: 14867055063 effective search space used: 14867055063 T: 11 A: 40 X1: 16 (7.4 bits) X2: 38 (14.6 bits) X3: 64 (24.7 bits)

K

0.0410

0.140

0.267

S1: 41 (21.7 bits) S2: 68 (30.8 bits)